

Subject: FW: Touch Base

Date: Mon, 07 Jul 97 15:53:00 PDT

From: "Hartman, John" <John_Hartman@tvratings.com>

To: "ATEK" <atek@gdi.net>, "Garry L. Fenimore" <mlink@mail.gte.net>

FYI,

John

From: Randy_Dougherty

To: HARTMAJD

Subject: Re: Touch Base

Date: Monday, July 07, 1997 1:01PM

John,

Sorry I haven't got back to you for a while. I have been out on travel and have been quite busy just playing catch up.

I haven't really had a chance to better define what types of business rules that I would want to apply to your business model in order to see how it would fit into our JSF maintenance concept. We are still pulling together the engineering team who will support this effort. I don't want to be putting you off, but I need to try to get back with you in late July or August.

If you haven't heard from me by the end of July, please send me another email.

Thanks

Randy D

Joint Strike Fighter

Reply Separator

Subject: Touch Base

Author: John_Hartman@tvratings.com at ORL-SMTP-G

Date: 6/16/97 1:01 PM

Hi Randy,

I just wanted to contact you in follow up to our recent meeting.

We at MasterLink are about to begin some additional construction work. I would like to focus that work on that which might aid our cause in taking our relationship to the next step. In my notes from our last meeting, I recorded the desire to see more examples of "what if", and "Policy effectiveness" query and report capabilities. We certainly can expand the scope of our demonstration prototype to include such examples. Is there any

other area on which you would like to see some expansion or attention? We do intend to start construction on some of the core framework classes of the

intelligent layer in addition to the demonstration prototype. Do you have any desire to comment on this in the short term?

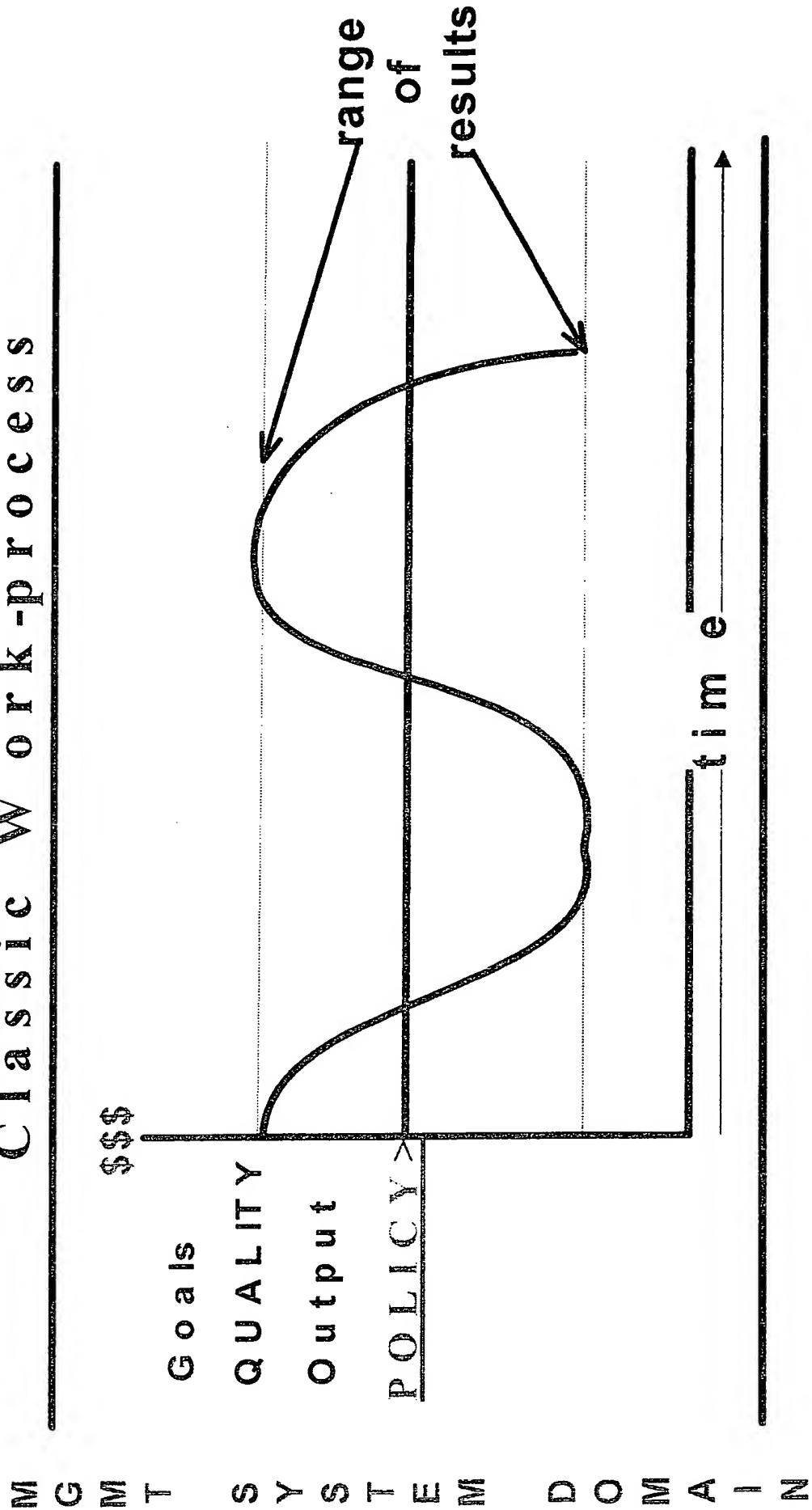
I'll probably give you a call in the next couple days to solicit your

Work Process

Specifications are:

- ◆ Methods of Actions
- ◆ Selected From Alternatives
- ◆ Based On Results
- ◆ Constantly Changing

Classic Work-process



M G M T S Y S T E M D O M A I N

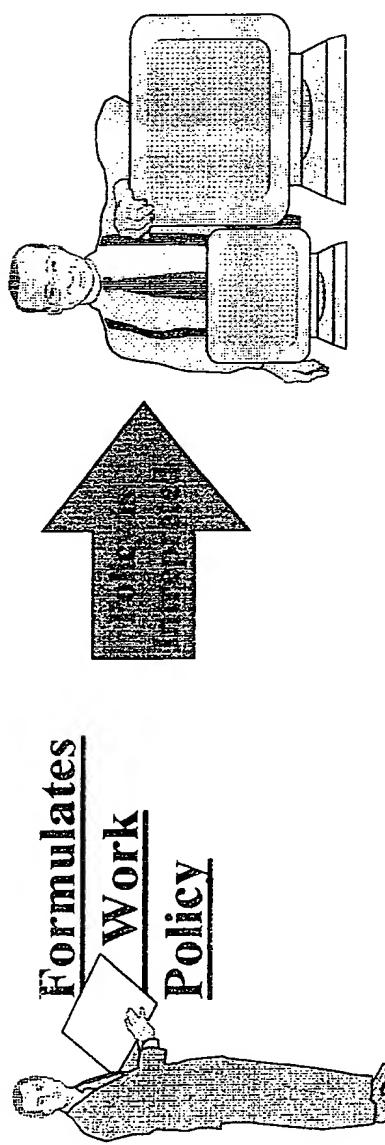
What Is MasterLink?

It is An Event-driven Tool Used to:

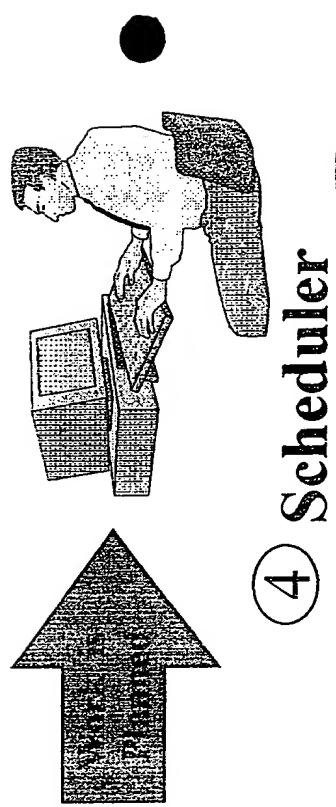
- ◆ Integrate Work Technologies
- ◆ Automate Supervision
- ◆ Link Actions to Specifications
- ◆ Track Performance

◆ Data-Centric Process Management

① Management

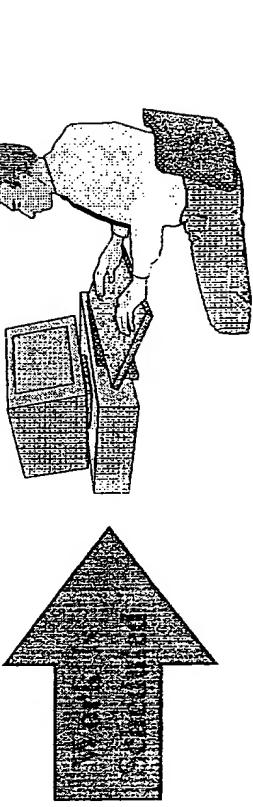


② Supervisor

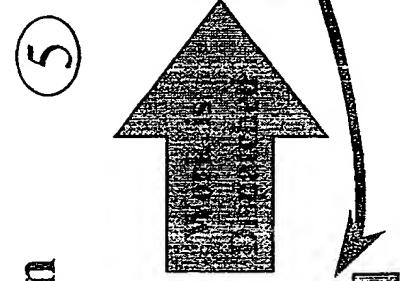


③ Planner

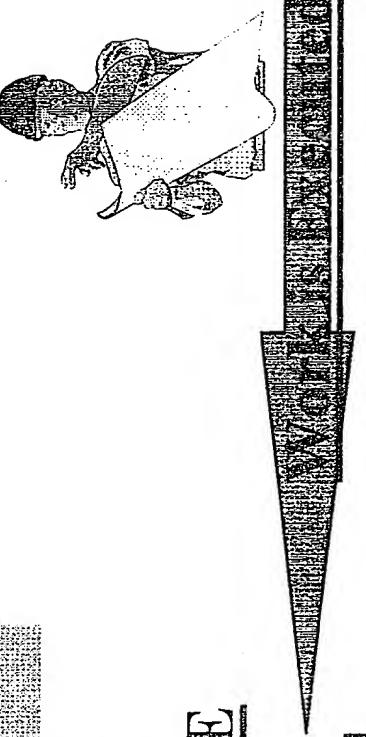
④ Scheduler



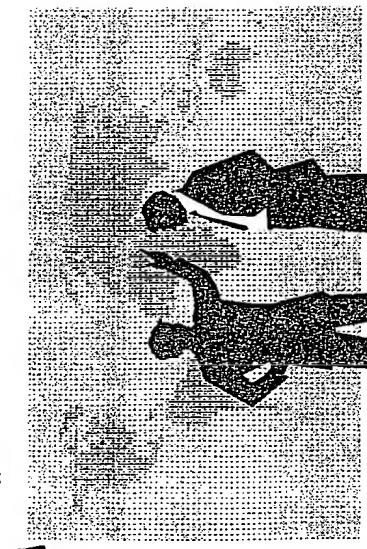
⑤ Dispatcher



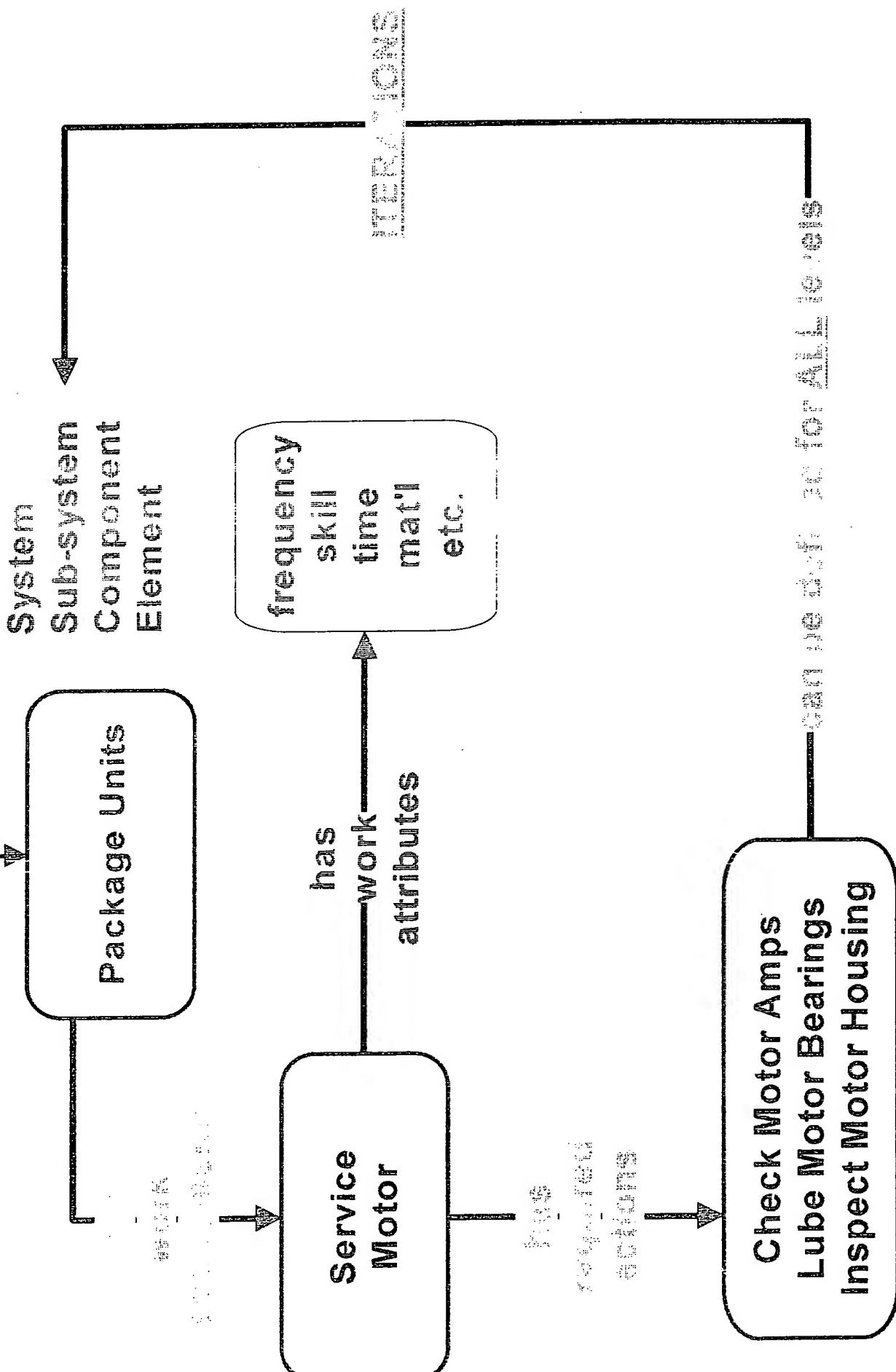
⑥ Technician



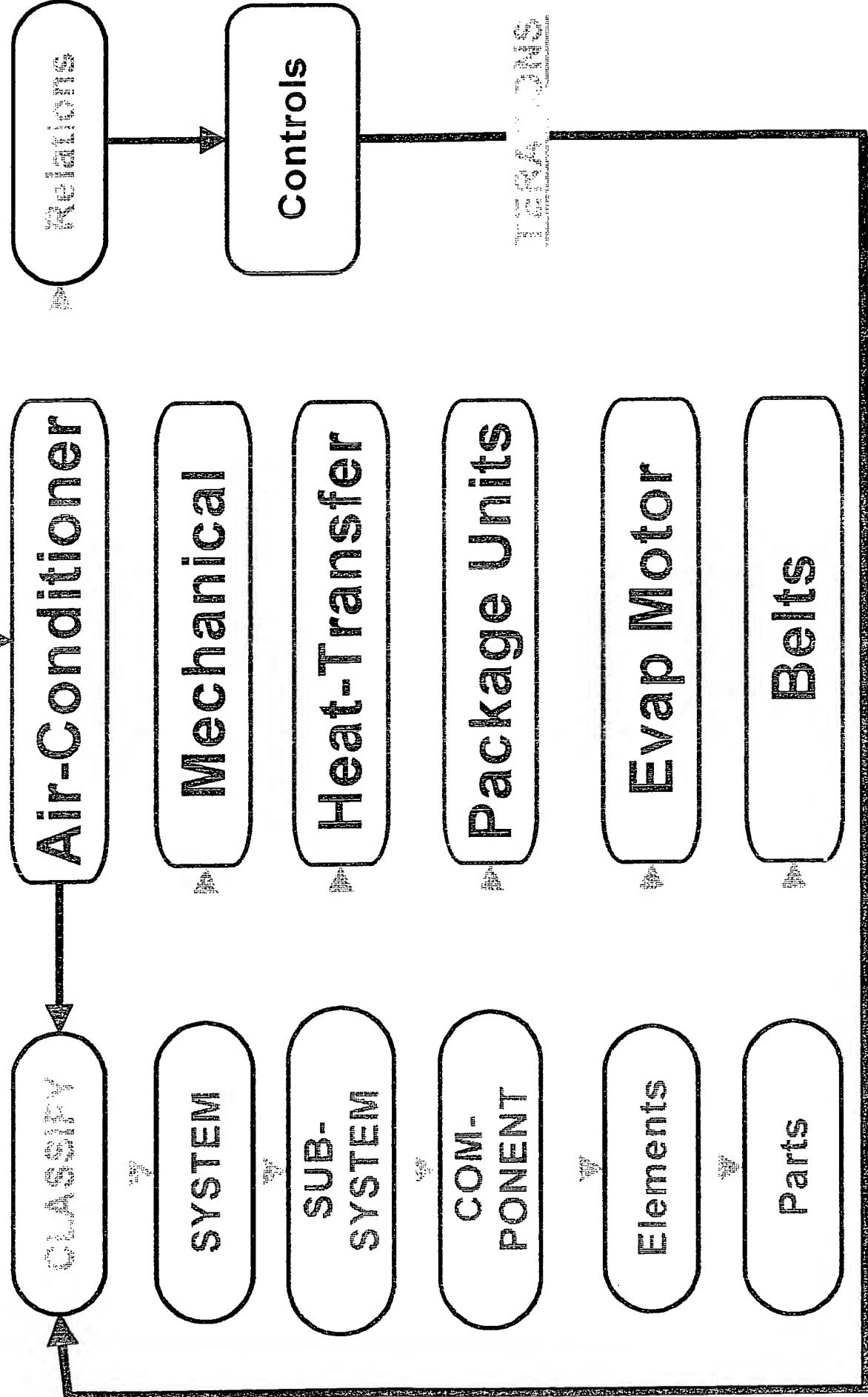
⑦ CUSTOMER
R
is Served



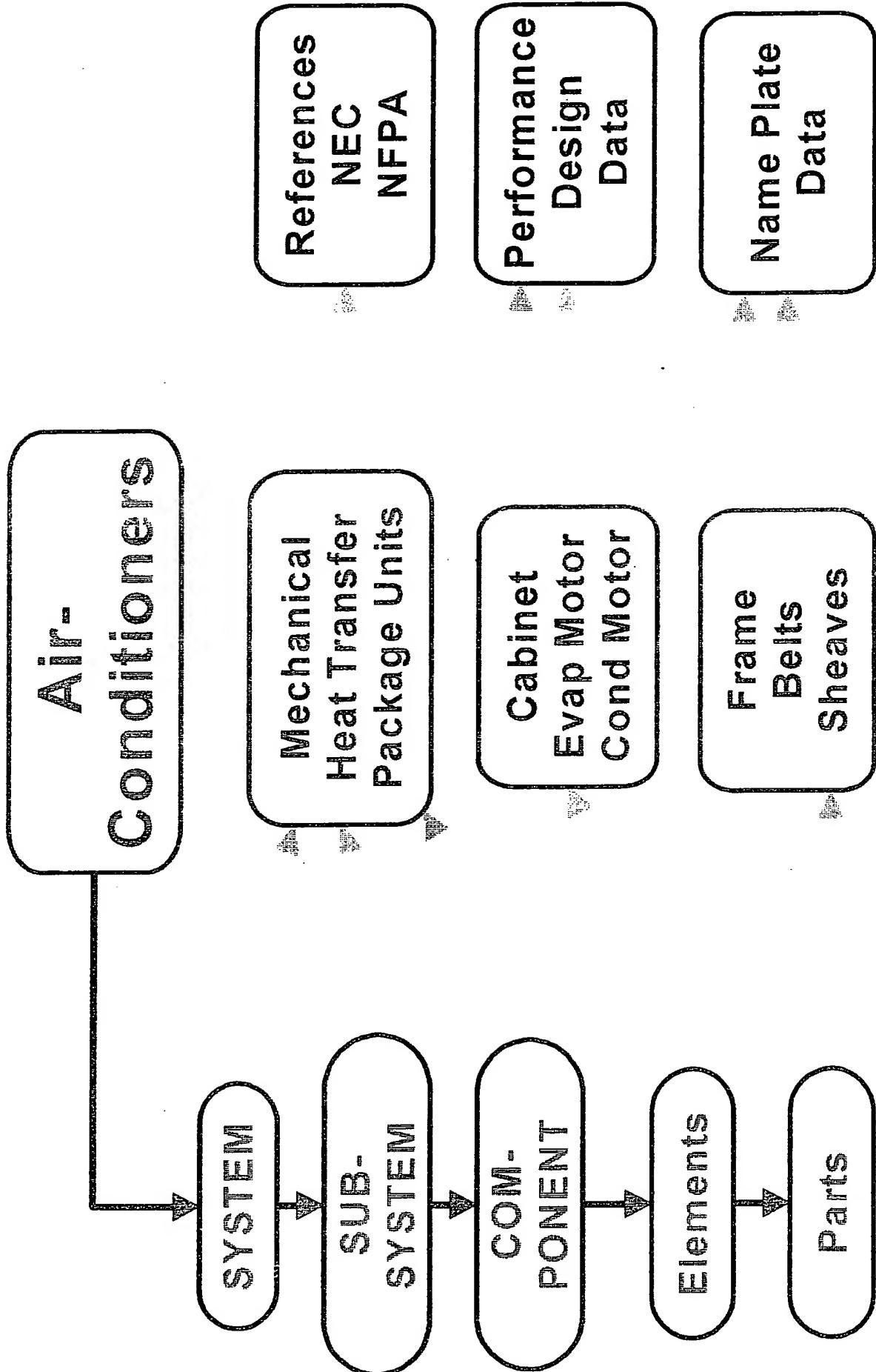
Target Task Definitions



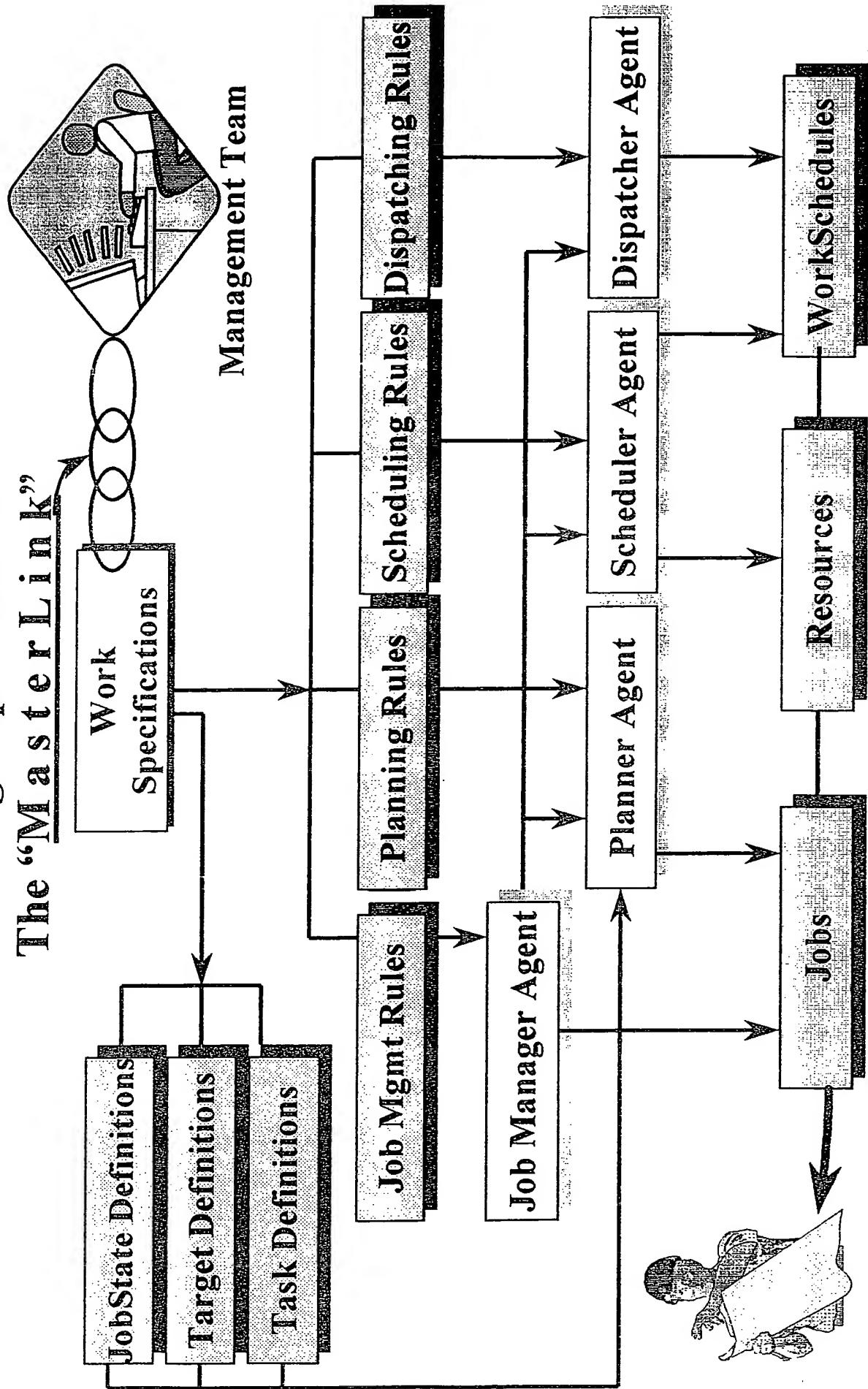
Work Target Definition



Target Design Data Definition



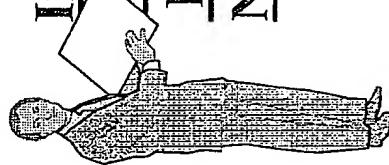
Work Force Optimization Through Specification The "Master Link"



Knowledge-based Specification Implementation

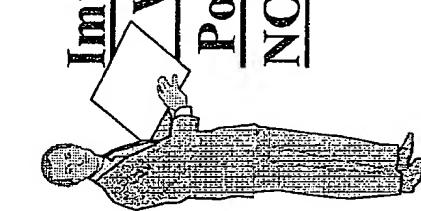
① Management

Implements
Work
Policy...
NOW!



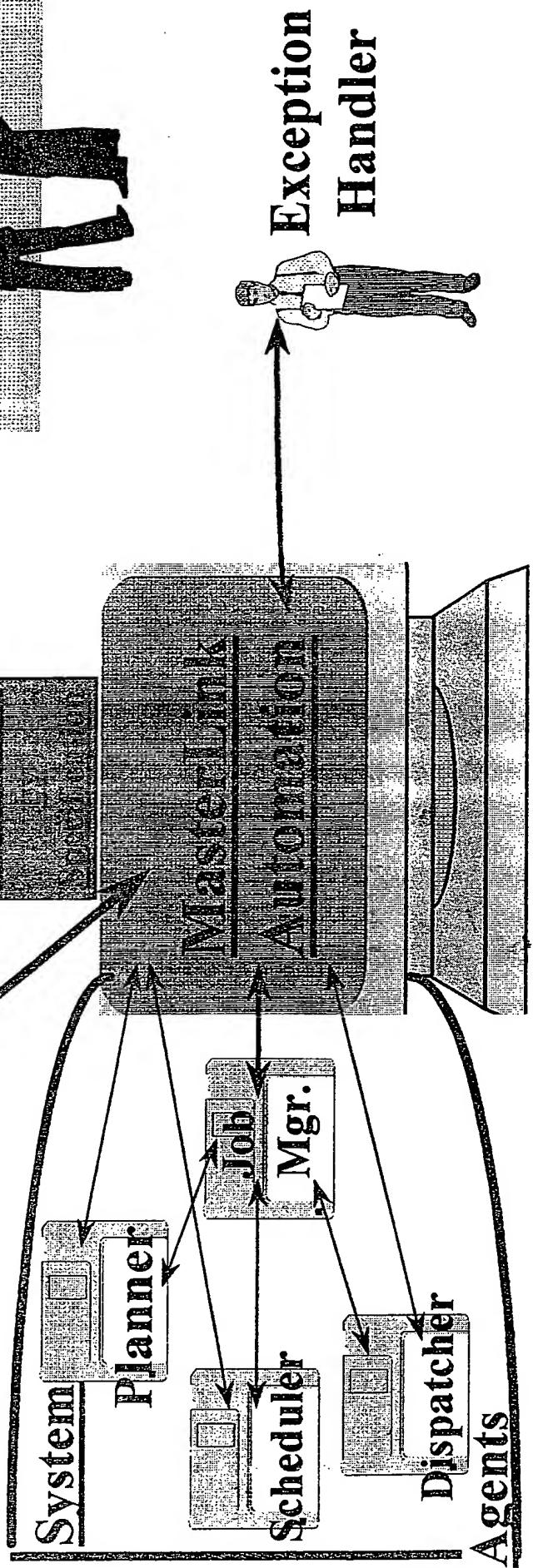
② Skill Worker

Better
Execution
Re
use

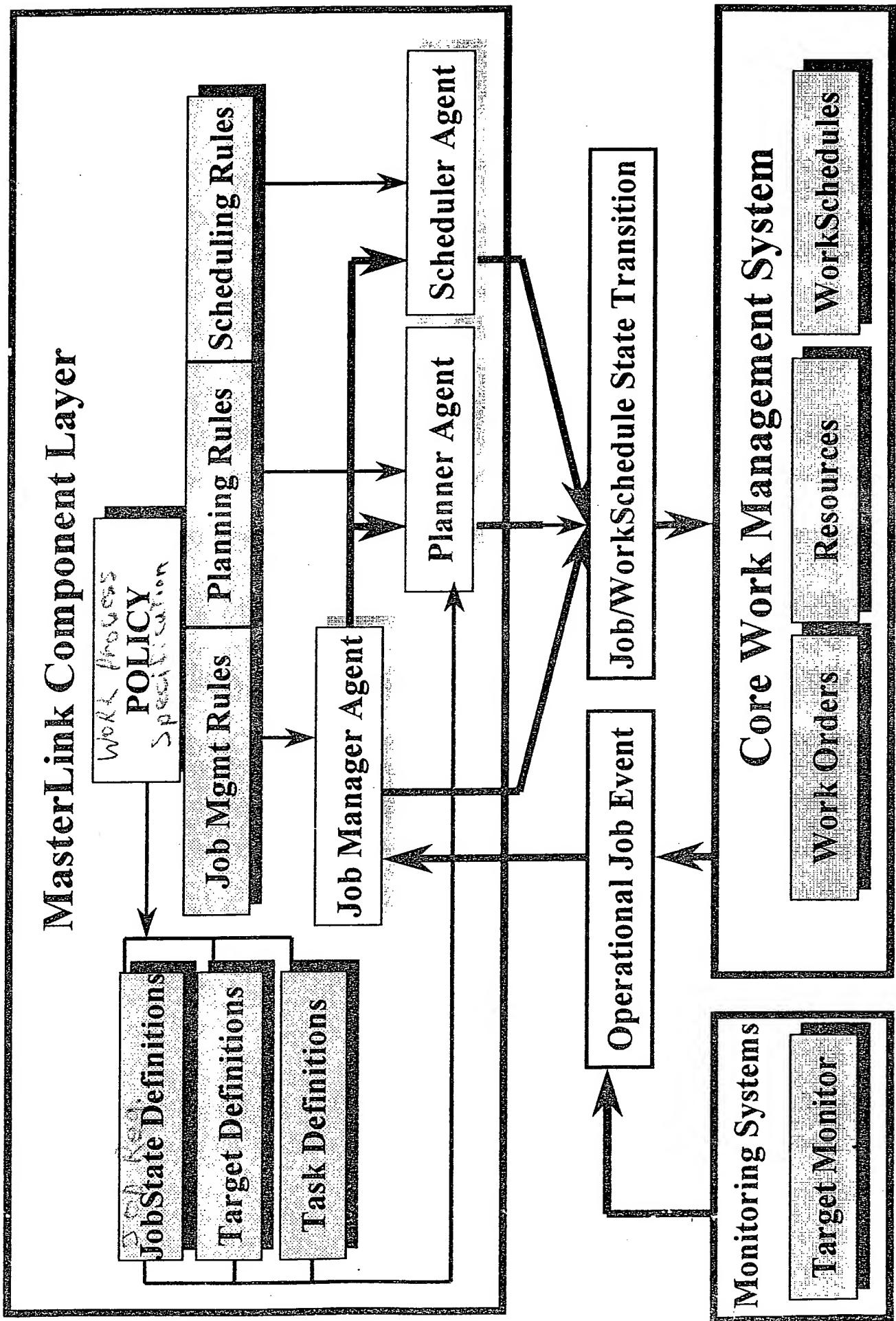


③ CUSTOMER

is Served...
Better!

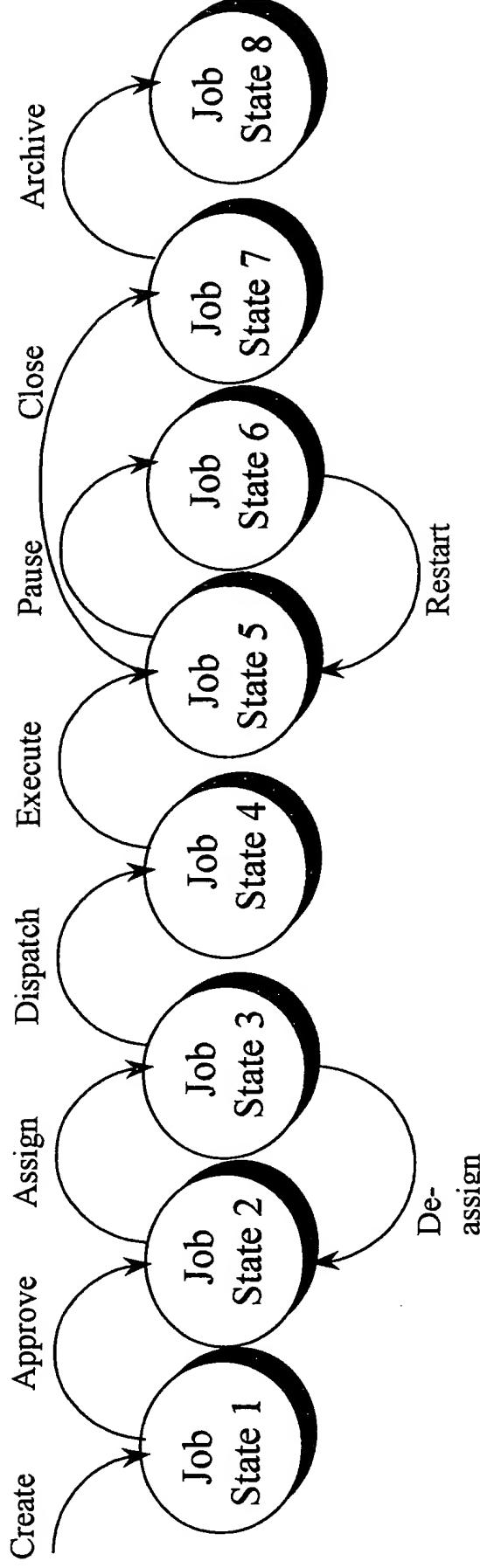


System Architecture Overview



JOB STATE TRANSITIONS

Example Job Type



- A series of states and transitions will be defined for each “type” of job to be managed by the system.
- A set of business rules governing each possible transition will be determined. Analysis will include consideration for vertical domain classes.
- System agents will use sets of rules to automate selected transitions. External interfaces will support manual transitions and overrides.
- “Planner” agent will address the generation or creation of jobs containing planned tasks.
- “Scheduler” agent will address the assignment of jobs to resources and time.
- “Dispatcher” agent will handle delivery of work schedules to resources.
- The worker, through a mobile device interface, will be the source for many transitions.
- “Job Manager” agent will act as a communications traffic cop receiving messages, representing events, from the external interfaces (either GUI or system based) , from the internal system agents, and from other MasterLink internal classes.

Diligence**April 3, 1997**

Subject: MasterLink possibilities
Date: Mon, 14 Jul 1997 09:31 -0500 (EST)
From: Randy_Dougherty@ccmail.orl.lmco.com
To: atek@GDI.net

Greg Howard 1st
contac February 1997

Garry,

Thank you for sharing your concepts for MasterLink work automation. As I stated in our meeting, the concepts which you presented to me have some very interesting possibilities for several upcoming projects that I am involved with for Lockheed Martin Information Systems. We are evaluating products which will assist in the maintenance of Lockheed Martin end-item products (aircraft, avionics end-items, etc).

When you are able to advance your MasterLink concept beyond the initial requirements stage and provide an initial prototype, I am very interested in seeing how your concept is converted to a implementation prototype. The potential for Lockheed Martin Information Systems to utilize MasterLink to automate our maintenance management systems processing is very exciting to me.

Again, thank you for your briefing and please keep in touch as your prototype is developed.

Randy Dougherty
407.306.4812

LOCKHEED MARTIN

Randy Dougherty
Manager, Logistics Into Systems

Betty
306-4031

Lockheed Martin Information Systems
12506 Lake Underhill Road, MP 1270
Orlando, Florida 32825-5602
Telephone 407.326.4812 Facsimile 407.306.2631
email: randy_dougherty@ccmail.orl.lmco.com

Subject: [Fwd: MasterLink possibilities]
Date: Thu, 17 Jul 1997 10:14:39 -0500
From: "Kent A. Weisner" <atek@gdi.net>
Organization: A-Tek Consultants, Inc.
To: hartmajd@tvratings.com
CC: mlink@mail.gte.net

Garry and John,

Here is an e-mail from Randy Dougherty
Manager, Logistics Info Systems
Lockheed Martin Information Systems
12506 Lake Underhill Rd., MP 1270
Orlando, FL 32825-5002
Tel (407) 306-4812 Fax (407) 306-4010
email: randy_dougherty@ccmail.orl.lmco.com

The communication speaks for itself! Nice job!

Kent Weisner

Subject: MasterLink possibilities
Date: Mon, 14 Jul 1997 09:31 -0500 (EST)
From: Randy_Dougherty@ccmail.orl.lmco.com
To: atek@GDI.net

Garry,

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Again, thank you for your briefing and please keep in touch as your prototype is developed.

Randy Dougherty
407.306.4812

feedback. I will generally let Kent be the primary interface between us so that we don't become a bother. Thanks for your time and consideration.

John Hartman



CONTRACT SERVICES
PROJECT MANAGEMENT
PERMANENT PLACEMENT

Mr. Paul S. Kenney
Project Engineer
Lockheed Martin Information Systems
12506 Lake Underhill Road, MP 1270
Orlando, FL 32825-5002

cc: John Hartman
Randy Dougherty

August 15, 1997

Dear Paul,

Thank you for the direction provided during our conversation with you Wednesday. We will proceed in developing MasterLink© with the following architectural components:

| <u>Client</u> | <u>Server</u> |
|-------------------------|-------------------------------|
| Windows NT | Windows NT |
| Visual Basic Interfaces | C++ Application Processes |
| | ILOG Rules (Inference Engine) |
| | Objectstore Database (OODBMS) |

Should you or Randy wish to change any of these we need to know it as soon as possible.

This guidance and agreement on this issue was very important to us so we develop coding in the right direction without wasting time going down a wrong pathway which we can ill afford to do.

Yes, we are looking forward to getting on contract in the near future so we are able to meet the requirements you have for your project. Doing so involves major changes for us at MasterLink that we discussed. Your assistance is needed for us to be able to respond appropriately and professionally as you would expect.

I met with John yesterday and he will be in touch with you next week to advise when you will receive the express package.

Regards,

A handwritten signature in black ink, appearing to read "Kent Weisner".

Kent A. Weisner

Subject:

Date: Wed, 27 Aug 97 15:30:00 PDT

From: "Hartman, John" <John_Hartman@tvratings.com>

To: "ATEK" <atek@gdi.net>, "Garry L. Fenimore" <mlink@mail.gte.net>

Kent & Garry,
Here is the text from my cover letter and the table of contents for the package. Looks like we ship on Thursday night.
John

August 27, 1997

Mr. Randy Dougherty
Manager of Logistics Information Systems
Lockheed Martin Information Systems
12506 Lake Underhill Road
MP 1270
Orlando, FL 32825-5002

Dear Randy,

Enclosed you will find the work we have done to enhance the MasterLink concepts based on feedback received at our meeting of May 30. This consists of some additional classes added to the MasterLink class models, some additional use cases, and some suggested initial interfaces to support those use cases. These use cases are in support of the requests for examples of how "what if" analysis and reporting would be implemented. This was one of the major feedback requests we received at our meeting. The enclosed documentation is limited to only these new design artifacts, but is representative of that which we have produced for all classes and use cases in the MasterLink design. See the enclosed table of contents for the enclosed documentation.

A second category of feedback we received was in regard to a working prototype. We have proceeded to build a working prototype development environment. This is based on Windows NT, C++, Visual Basic, ODI ObjectStore, and ILOG libraries. We will soon be ready to discuss what initial MasterLink functionality should be included in the first functioning deliverable to be based on this architecture.

A third request we heard was in regard to the "ease of use" associated with the use cases for maintaining Policy instances. We have not had time to suggest a response to this explicitly, but we feel confident we will be able to provide a solution.

We feel that this deliverable should provide the confidence in MasterLink to deliver state of the art solutions to work management requirements that will benefit the needs of Lockheed Martin Information Systems and their customers. We look forward to your response to this submission.

Yours truly,

John D. Hartman
Chief Technical Officer

cc: Paul S. Kenney

enclosures

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Project Work Requirements

- ? Use case diagram for the "Project Work Requirements" use case.
- ? Initial class specification for the "User" class of actor.
- ? Initial class specification for the "Manager" class of actor.
- ? Initial specification for the "workparameters" association on this use case.
- ? Initial specification for the "requirements&variances" association on this use case.
- ? Initial specification for this use case, "ProjectWorkRequirements".
- ? Use case schema for this use case, "ProjectWorkRequirements".
- ? Initial GUI rendering for the "ProjectWorkRequirements" use case.

Maintain Mission

- ? Use case diagram for the "Maintain Mission" use case.
- ? Initial specification for the "mission,attributes" association on this use case.
- ? Initial specification for this use case, "MaintainMission".
- ? Use case schema for this use case, "MaintainMission".
- ? Initial specification for the "policy" association on this use case.
- ? Initial specification for the "MaintainPolicy" use case which extends the MaintainMission use case.
- ? Initial GUI rendering for the "Maintain Mission" use case.
- ? Initial GUI rendering for the "Maintain Policy" use case (as per original demo).

Supporting Documentation

- ? Class diagram for the concept of a "Mission".
- ? Initial class specification for the "Mission" class.
- ? Initial class specification for the "MissionObjective" class.
- ? Initial class specification for the "Policy" class.
- ? Initial class specification for the "EffectiveDate/TimeRange" class.
- ? Initial class specification for the "MissionStatus" class.
- ? Initial class specification for the "MaterialInventoryLevels" class.
- ? Initial class specification for the "ResourceLevels" class.
- ? Initial class specification for the "WorkScheduleLevels(shifts)" class.
- ? Class diagram for the concept of the "MissionMaintenanceInterface".
- ? Initial class specification for the "MissionMaintenanceInterface" class.
- ? Initial class specification for the "MissionList" class.
- ? Initial class specification for the "MissionObjectiveList" class.
- ? Initial class specification for the "PolicyList" class.
- ? Initial class specification for the "MaterialInventoryLevelsList" class.
- ? Initial class specification for the "ResourceLevelsList" class.
- ? Initial class specification for the "MissionStatusControl" class.
- ? Initial class specification for the "WorkScheduleLevelsList" class.
- ? Initial class specification for the "EffectiveDate/TimeRangeControl" class.
- ? Initial class specification for the "PolicyInterface" class. (We also have the use case schema, and the class diagram with supporting class specifications which describe this interface. This interface is part of our original demonstration, and a screen shot is included in this package.)

? Initial class specification for the "LevelsModificationControl" class.
? Initial class specification for the "WorkScheduleLevelsModificationControl" class.

? Class diagram for the concept of a "Policy".
? Initial class specification for the "Policy" class.
? Initial class specification for the "EffectiveDate/TimeRange" class.
? Initial specification for the "effectivedates" association on this class diagram.
? Initial class specification for the "PolicyManager" class.
? Initial specification for the "manages" association on this class diagram.
? Initial class specification for the "Site" class.
? Initial specification for the "sites" association on this class diagram.
? Initial class specification for the "Target" class.
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? Initial specification for the "cycles" association on this class diagram.
? Initial class specification for the "JobManagerRules" class.
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? Initial class specification for the "PlannerRules" class.
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? Initial class specification for the "SchedulerRules" class.
? Initial specification for the "schedulingrules" association on this class diagram.
? Initial class specification for the "DispatcherRules" class.
? Initial specification for the "dispatchingrules" association on this class diagram.
? Initial class specification for the "TaskDefinition" class.
? Initial specification for the "taskdefinitions" association on this class diagram.
? Initial class specification for the "BaseTaskDefinition" class.
? Initial specification for the "existing" association on this class diagram.
? Initial class specification for the "TargetDefinition" class.
? Initial specification for the "targetdefinitions" association on this class diagram.
? Initial class specification for the "BaseTargetDefinition" class.
? Initial specification for the "existing" association on this class diagram.
? Initial class specification for the "JobTypeLifeCycle" class.
? Initial specification for the "joblifecycles" association on this class diagram.
? Initial class specification for the "MissionObjective" class.
? Initial specification for the "supports" association on this class diagram.
? Initial class specification for the "Manager" class of actor.
? Initial specification for the "owners" association on this class diagram.

MasterLink

Work Automation & Simplification

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407/299-3900 • Fax 407/299-8200 • E-mail: atek@gdi.net

CONFIDENTIAL

Randy Dougherty
Manager, Logistics Info Systems
Lockheed Martin Information Systems
12506 Lake Underhill Road, MP 1270
Orlando, FL 32825-5002

September 10, 1997

Dear Randy,

During our telecon last week you said, "What is missing for me is a verbal description from A to Z as to what this thing is going to do." Attached is a confidential summary prepared for you.

We believe our use of the word policy has caused some confusion and have substituted "Work Process Specifications" in its place.

See page two and three covering All Work Environments and Domain Specific Elements. These two pages have definitions on them essential to MasterLink©.
→ This information was given to Greg Howard several months ago and may not have been passed along to you.

Gary Fenimore and I would like to have a telecon with you tomorrow in the p.m. or at your earliest convenience. I would like to have a business discussion as well.

Thank you.

Sincerely,



Kent A. Weisner

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